PCS10350APME

CLAIMS

1. An amino acid sequence comprising the sequence presented as SEQ ID No. 1 or a variant, homologue, fragment or derivative thereof.

2. A nucleotide sequence encoding the amino acid sequence as defined in claim 1.

3. A nucleotide sequence comprising the sequence presented as SEQ ID No. 2 or a variant, homologue, fragment or derivative thereof.

4. A nucleotide sequence that is capable of hybridising to the nucleotide sequence according to claim 3. or the opposite strand thereof.

5. A nucleotide sequence that is capable of hybridising to the nucleotide sequence according to claim 4.

6. A vector comprising the nucleotide sequence according to ~~any one of claims 2 to 5~~ claim 2.

7. A host cell into which has been incorporated the nucleotide sequence according to ~~any one of claims 2 to 6~~ claim 2.

8. An assay method for identifying an agent that can affect PDE1B2 activity ~~or expression~~, the assay method comprising

contacting an agent with an amino acid according to claim 1 ~~or a nucleotide sequence according to any one of claims 2 to 7~~; and

measuring the activity ~~or expression~~ of PDE1B2 ;

wherein a difference between a) PDE activity ~~or expression~~ in the absence of the agent and b) PDE activity ~~or expression~~ in the presence of the agent is indicative that the agent can affect PDE1B2 activity ~~or expression~~.

9. An assay method according to claim 8 wherein the assay is to screen for agents useful in the treatment of a cardiovascular disorder, a GI disorder, and/or disorders found in any any one or more of the cardiovascular system, the GI system, spleen.

10. A process comprising the steps of:

(a) performing the assay according to claim 8 ~~or claim 9~~;

(b) identifying one or more agents that do affect PDE1B2 activity ~~or expression;~~ and

(c) preparing a quantity of those one or more identified agents.

11. A method of affecting *in vivo* PDE1B2 activity ~~or expression~~ with an agent;

wherein the agent is capable of affecting PDE1B2 activity ~~or expression~~ in an *in vitro* assay method;

wherein the *in vitro* assay method is the assay method defined in claim 8 ~~or claim 9.~~

12. Use of an agent in the preparation of a pharmaceutical composition for the treatment of a disease or condition associated with PDE1B2 , the agent is capable of having an effect on the activity or expression of PDE when assayed *in vitro* by the assay method according to claim 8 or claim 9.

13. An enzyme capable of having an immunological reaction with an antibody raised against PDE1B2 .

14. A nucleotide sequence coding for a PDE, wherein the nucleotide sequence is obtainable from NCIMB 41026.

15. A PDE wherein the PDE is expressable from a nucleotide sequence obtainable from NCIMB 41026.

16. Use of an agent which has an effect on the activity of PDE1B2 or the expression thereof in the preparation of a pharmaceutical composition for the treatment of a disease or condition associated with PDE1B2 .

17. Use of a PDE1B2 gene and/or expression product thereof in the preparation of a medicament for the treatment and/or modulation of disturbances associated with an imbalance or disturbance of PDE1B2 .

18. Use according to claim 17 wherein the PDE1B2 and/or expression product thereof is used to screen for agents that can modulate the activity of the PDE1B2 and/or expression product thereof.

19. A PDE1B2 agonist wherein the PDE1B2 is as defined in claim 1 or is the nucleotide sequence coding for same.

20. A PDE1B2 antagonist wherein the PDE1B2 is as defined in claim 1 or is the nucleotide sequence coding for same.

21. A recombinant PDE1B2 enzyme.

22. A recombinant nucleotide sequence encoding a PDE1B2 enzyme.

23. A PDE1B2 enzyme substantially as described herein.